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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,284	04/12/2001	Ephraim Zehavi	205,136	4640
23419	7590	03/15/2004		
COOLEY GODWARD, LLP 3000 EL CAMINO REAL 5 PALO ALTO SQUARE PALO ALTO, CA 94306			EXAMINER TSE, YOUNG TOI	
			ART UNIT 2634	PAPER NUMBER 11

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,284

Applicant(s)

ZEHAVI, EPHRAIM

Examiner

YOUNG T. TSE

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Groups II (however, Applicant is right that Group III should be grouped together with Group II, therefore, both Group II and Group III or claims 21-36 are elected) in Paper No. 10 is acknowledged.
2. Claims 1-20 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made without traverse in paper No. 10.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant note the abstract of the instant application is not directly related to the invention as recited in the elected claims 21-36.

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4. The disclosure is objected to because of the following informalities: for the formality of the application under the present office practice, applicant(s) is required to replace "Claims" with "I or We Claim", "The Invention Claimed Is" (or the equivalent) before the Claims part of the specification of the instant application. See MPEP 608.01(m). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21 (line 4) and claim 29 (lines 6-7), the phrase "the bitstream" lacks antecedent basis.

In claim 30, lines 2-3, it is unclear what is meant by "at least last one of ... "?

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 21, 25-29 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todoroki in view of Heegard et al..

Todoroki (US Patent No. 5,465,267) discloses a transmitter circuit and a receiver circuit in Fig. 1. The transmitter circuit includes a Reed-Solomon encoder 21, an interleaver 22, a selector 24, a convolutional encoder 6, and a PSK modulator 26.

With respect to claims 21 and 29, the transmitter clearly includes the convolutional encoder 6 for encoding the selected signal from the selector 24 and the PSK modulator for modulating the encoded signal having a variable bit rate (col. 1, lines 23-32 and 61-67). Although Todoroki does not explicitly show the detailed embodiment of the encoder for encoding a group of k input bits into n coded output bits wherein n is equal or greater than k to the PSK modulator 26.

Heegard et al (EP 0 982 892 A2) discloses a BCC rate $\frac{1}{2}$ encoder 10 and a QPSK scramble map or modulator 12 in Fig. 1 and a BCC rate $\frac{2}{3}$ encoder 50 and an 8PSK scramble map or modulator 52 in Fig. 5.

Fig. 2 shows the detailed block diagram of the BCC rate $\frac{1}{2}$ encoder 10 of Fig. 1 comprising delay elements 20 and adders 30 for converting an input signal 22 into two output signals 24 and 26.

Fig. 6 shows the detailed block diagram of the BCC rate $\frac{2}{3}$ encoder 50 of Fig. 5 comprising delay elements 60 and 62 and adders 64 for converting two input signals into three output signals.

Therefore, it would be been obvious to one of ordinary skill in the art to use a $\frac{1}{2}$ or $\frac{2}{3}$ rate encoder in Todoroki's encoder having the structure as shown in Fig. 2 or Fig.

6 of Heegard's encoder in order to convert a number of input signals into a number of output signals to the PSK map of modulator for mapping the constellation of symbols of the transmitter signal.

With respect to claims 25 and 32, the modulator clearly is a PSK modulator.

With respect to claims 26 and 33, the mapper 12 or 52 are coupled to a scramble pattern generator 14 to rotate the phase of the constellation points as shown in Fig. 4.

With respect to claims 27 and 34, the delay elements and adders are shown in Fig. 2 and Fig. 6.

With respect to claims 28 and 35, the modulation of the encoded signal by the modulator 26 is variable in response to the variable data rate as mention above.

Allowable Subject Matter

9. Claims 22-24 and 30-31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

References Wei, Citta et al., Schmidt, Odenwalder et al., and Jones et al. are related to transmitter circuit comprising a convolutional encoder, interleaver, and a map or modulator circuit. However, none of the prior art show or teach the variable data rate is obtained by the equation of the multiplication of a sampling rate R_s and the $\log_2(m)$ of a code rate R_c .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

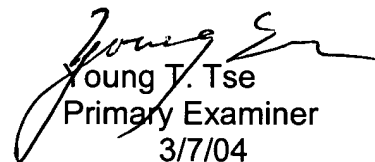
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Young T. Tse
Primary Examiner
3/7/04